

Cerberus® PRO

252-Point and 504-Point Addressable Fire Alarm Control Panel Models FC922 | FC924

Architect & Engineer Specifications

- Addressable fire alarm control panel (FACP) intended for mid-size building applications
- Comprised of the following system components:
 - Operating units
 - Periphery boards
 - Power supplies
 - System enclosures 'Walk Test'
- System features:
 - Supports 252-to-504 addressable devices:
 - One (1) to four (4) 'Class B'; one (1) to two (2) 'Class A' for Model FC922
 - One (1) to eight (8) 'Class B'; one (1) to four (4) 'Class A' for Model FC924
- 10,000-event history-logging capability
- Includes one (1) 'Class A' or two (2) 'Class B' notification appliance circuits (NACs)
- Resettable and non-resettable 24VDC, [nominal] auxiliary power
- Connectivity to a leased-line / city-tie module
- Releasing module supports activation of releasing valves in pre-action / deluge systems / agent release
- Off-normal warning message prior to reset
- Fast and easy set-up with auto-configuration feature
- Networkable up to 32 panels using SafeDLink / CV Web
- Cerberus® DMS Danger Management Station can monitor and control up to 32 Models FC922 and FC924 FACP's
- Supports multiple global displays
- Digital alarm communication transmitter (DACT)
- UL 864 10th Edition Listed, ULC-S527 Listed
- FM, CSFM & NYC Fire Department Approved

Product Overview

The Cerberus PRO 252-point (Model FC922) / 504-point (Model FC924) addressable FACP is designed to meet the fire-protection needs of mid-size buildings. This advanced FACP offers features typically required in mid-size buildings in a package that is easy to install and competitively priced.

Additionally, Models FC922 and FC924 are networkable, allowing the systems to fulfill the growing fire-protection needs of the building. The programming software for the 252/ 504-point fire systems is held in flash electrically erasable programmable read-only memory (EEPROM).

The following Cerberus PRO system components are used in the 252-point / 504-point FACP:

- Operating units
- Periphery boards
- Power supplies
- System enclosures

Other options are available to meet specific needs.

Models FC922 and FC924 are FM (#3010); CSFM(#7165-0067:0259) and FDNY (#6104) Approved.



Model FC922

Specifications

Operating Interface Unit

The Operating Interface Unit (Model FCM2018-U3 or Model FCM2019-U3) functions as the operating interface and central microprocessor for Models FC922 and FC924 with up to 10,000 event history log.

Either operating interface unit provides multi-use capability for each end-user to efficiently 'Acknowledge' events; to quickly control the NACs of the FACP, and to permit a manual reset of the respective system. Detailed data about the nature and location of the events can also be displayed, via a backlit, 2"—x— 4-3/4" (5.1 cm. —x— 12.1 cm.) LCD screen and the four-way navigation push button at the top of the FACP.

Note: For applications in **Canada** that require a Desigo operating unit with LEDs, Model FCM2035-U3 must be ordered.

Periphery Boards

The periphery boards (Models FCI2016-U1 and FCI2017-U1) serve as the main operating components for the 252 / 504-point FACP. Each module operates and monitors input-device identity; as well as controls the signaling-line circuits that communicate with smoke detectors and other field devices (i.e. —C-NET).



Power Supplies

All functions are supported by the power supplies (Model FP2011-U1 or Model FP2012-U1), which therefore eliminate the need for external power supplies.

Further, the 170-Watt power supply (Model FP2011-U1) and 300-Watt power supply (Model FP2012-U1) provide primary, 24VDC nominal power for normal operation to Models FC922 and FC924. Both power supplies are filtered and regulated. Model FP2011-U1 is rated at 6.5 Amps, and the rating for Model FP2012-U1 is 11.5A.

The 170-Watt power supply incorporates a 4.0A, non-resettable slow-blow fuse on the primary input, and includes a built-in AC-line filter for surge and noise suppression. Model FP2011-U1 mounts in the FACP enclosure, and there are no serviceable Cerberus PRO parts to be maintained.

The 300-Watt power supply incorporates two (2) 6.3A replaceable, non-resettable slow-blow fuses on the primary input and includes a built-in AC line filter for surge and noise suppression. Model FP2012-U1 mounts in the FACP's enclosure, and there are no serviceable Cerberus PRO parts to be maintained.

System Enclosures

The Cerberus PRO fire-alarm enclosures and their accessories provide a complete set of hardware for mounting all Cerberus PRO main-system and remote terminal cards and modules.

The hardware allows this Cerberus PRO system to be configured for a variety of applications, as well as for future system upgrades. Included in the enclosure series are back box and door sets; removable mounting plates and clear lenses, as well as blank plates for use with the enclosure doors.

All enclosures come with ground straps for the inner and outer doors, shield termination lugs, grounding lugs, and tie wrap lances for securing wire. All Cerberus PRO two height-unit (2HU) enclosures can also mount system back-up batteries to 33AH in capacity.

Models FC922 and FC924 utilize a two-height-unit enclosure. The following components comprise a complete two-height-unit enclosure:

- One (1) back box, (Model FHB2002-U1 / R1)
- One (1) or two (2) inner doors, (Models FHD2004-U1 or FHD2005-U1)
- One (1) outer door, (Model FHD2002-U3 / R3 or FHD2003-U3 / R3)
- One (1) or two (2) clear windows, (Model FHD2006-U1)

The approximate size for each two-height-unit enclosure is: 27.5" (70cm.) high; 21.5" (54.6cm.) wide, and 5.75" (14.6cm.) deep. The weight, without any attached components, is approximately 6.3 Lbs. (2858 g).

Note: One (1) window is installed for Model FHD2002-U3 / R3 outer door, and two (2) windows are required for Model FHD2003-U3 / R3

Additionally, the two-height-unit enclosure supports the following optional components:

- Enclosure trim kit (for flush-mounting)
- Battery bracket (to comply with seismic certification)
- DIN rail kit (provides connection between internal-system wiring and field wiring)

Optional Accessories

Digital Alarm Communication Transmitter (DACT)

The DACT is used to provide communication between Models FC922 and FC924 and with either a central or remote monitoring station. The Model FCA2015-U1 module mounts directly on the back enclosure and connects to the periphery boards. The DACT enables remote transmission of alarms and events via a public telephone line.

Releasing Module

The releasing module (Model XCI2001-U1) supports activation of releasing valves in pre-action / deluge systems (including double-interlock pre-action systems, or Sinorix® Engineered Fire Suppression systems). Activation can be event-controlled or performed by addressable manual pull stations. The releasing module is installed on the periphery board, and supports `Class B' releasing circuits.

When installed on Models FC922 / FC924, the releasing module contains an integral manual-disconnect switch for releasing circuits. This essential feature protects the releasing circuits from accidental discharge during maintenance.

Leased-Line / City-Tie Module

The Leased-Line / City-Tie module (Model FCI2020-U1) is used as an optional module, providing a local-energy output for municipal call-box connection.

Model FCI2020-U1 also gives a reverse-polarity output for leased-line connection. Model FCI2020-U1 is installed on the periphery board for Models FC2025 and FC2050 FACP's.

When used for connection to a municipal call box, the city-tie function supports Alarm-event transmission. When used for leased-line connection, the module supports two (2) leased telephone lines for transmitting *Alarm*, *Trouble* and *Supervisory* events.

Battery Disconnect Module

The Battery Disconnect Module (Model FCA2032-U1) is specifically designed to disconnect the backup battery on the Cerberus PRO 252 / 504-point addressable FACP when its voltage drops below 19VDC. Model FCA2032-U1's cut-off capability prevents the battery from operating beyond its normal power level for basic system operation.

Hardware Migration Kit

The Cerberus PRO 922/924 panel offers support for Siemens legacy addressable and conventional systems. Model FHA2056-series kits are specifically designed for the seamless transition of an existing Siemens FS-250 (FireSeeker) or MPC6000 control panel into a fully operational 50 | 252 or 504-point addressable Cerberus PRO fire-alarm FACP, [FC901 | FC922 or FC924], respectively.

Each shipment of the Model FHA2056-series kits contains the following pieces of equipment:

- One (1) outer door
- One (1) inner door
- One (1) hinge-assembly bracket
- One (1) back plate
- One (1) inner-door bracket

NOTE: The five (5) items that comprise one (1) Model FHA2056-series hardware-migration kit cannot be ordered individually.

Model FHA-MIQKIT-04/-05 offers support for legacy MXL and MXL-IQ peripherals using the FCL2004 device interface module.

Hardware Migration Kit (cont.)

This allows the user to configure a Cerberus PRO panel to communicate to older addressable devices, offering a seamless migration solution to the latest technology system.

Network Module

The C-WEB network module (Model FN2001-U1) is used to network up to 16 FACP's, or one (1) fire terminal, via the C-NET system bus.

Model FN2001-U1 is plugged into the Operating Units (Models FCM2018-U3 /R3 and FCM2019-U3 /R3). Model FN2001-U1, which connects to a system input / output bus, has ground-fault monitoring, as well as an integrated degrade-mode feature. Redundant networking is done with one (1) network module per FACP [Simple-Loop Trouble]. There is electrical isolation between the system bus and FACP.

Remote Display Terminals

The Remote Display Terminals (Models FT2014-U3 /R3 and FT2015-U3 /R3) are remote annunciators that's how the existing status of Models FC922 / FC924. The remote display terminals (Models FT2014-U3/R3 and FT2015-U3/R3) are remote annunciators which can be configured as global displays, and indicate real-time system status.

Light-emitting diodes (LEDs) will illuminate for any given *Alarm, Supervisory and Trouble* Cerberus PRO-system event. The LCD screen will give details of the event in alphanumeric form. The display screen can be scrolled, via the four-way navigation button, to reveal additional events.

Model FT2014-U3 /R3 is a display-only remote annunciator that has one (1) button used to silence the local sounder. Model FT2015-U3 /R3 has three (3) control buttons for 'acknowledging' events, 'silencing' audible circuits and 'resetting' the system. Additionally, there are three (3) user-programmable buttons available. Model FT2015-U3 /R3 has an integral key switch that enables the control buttons to operate.

The remote display terminals are remotely connected to Models FC922 and FC924, via the RS-485 interface. Models FC922 and FC924 require the Model FCA2016-U1 RS-485 module to provide communication to the remote display terminals. Model FCA2016-U1 supports Style 4 or Style 6 wiring. Up to eight (8) modules can be supported on a RS-485 bus.

The remote display terminals require 24VDC [nominal] power, and the necessary power can be provided from this Cerberus PRO FACP or from another UL / ULC Listed, 24VDC power source.

Note: A Model FHD2012-U1 inner door can be optionally purchased in UL markets. The inner door mounts with the optional Model FT201x Series Remote Display terminals. Having a Model FHD2012-U1 inner door installed can assist in preventing unauthorized access to the RDT.

S-series License Keys

The S1 license key (Model FCA2033-A1) allows for virtual monitoring and control between a 252 / 504-point addressable fire-only panel and a personal computer.

The S2 license key (Model FCA2034-A1) is a BACnet output, and is used for monitoring-only purposes by a 3rd-party system for life-safety objects.

The S3 license key (Model FCA2035-A1) is a combination license key that allows for virtual monitoring and control, as well as for distribution of BACnet (monitoring-only).

S-series License Keys (cont.)

A four-digit personal identification number (PIN) must be used in order to prevent unauthorized access.

Tabular Annunciators

Tabular annunciators allow system events sent from Cerberus PRO addressable panels to be displayed remotely in real-time.

The Model FT2008 series of tabular annunciators has 16 zones, and the Model FT2009 series uses 96 LEDs for 32 zones.

Up to two(2) light-emitting diodes (LEDs) can be used per zone. Tabular annunciators provide outputs for system and zone status, and are orderable in either black or red.

Remote Peripheral Module

The Remote Peripheral Module (Model FCA2018-U1) provides a means of connecting a Desigo FACP to a parallel printer (Model PAL-1) for creating hard copies of system-status and configuration reports.

Model FCA2018-U1 is a supervised, intelligent module that has built-intransient protection and plain-decimal addressing.

Model FCA2018-U1 is remotely connected to the Model FCA2016-U1 RS-485 communication bus from any Desigo Fire Safety system enclosure. Model FCA2018-U1 uses 'Class B' (Style 4) or 'Class A' (Style 6) wiring, and provides two (2) RS-232 serial ports and a one (1) parallel port, thus connecting to Model PAL-1.

LED Annunciator Driver

The Model FT2007-U1 LED Annunciator Driver provides custom graphic annunciators on addressable Cerberus PRO FACP's. This optional system module provides 96 highly programmable outputs to drive LED indicators. There are 16 inputs to accommodate user-system commands: *Silence, Unsilence, Reset, Acknowledge* and *Lamp Test*.

Model FT2007-U1 is supervised via aRS-485 interface. A maximum eight (8) modules are allowed on each RS-485 communication bus.

Graphics Input / Output Driver

The Graphics Input / Output (I/O) Driver (Model FT2003-U1) is a fire-system accessory on the RS-485 (Model FCA2016-U1) interface circuit. Model FT2003-U1, which serves as a combination standalone remote display / operating unit, provides the ability to build a graphic annunciator for the Desigo Fire Safety 252 / 504-point addressable FACP's.

Model FT2003-U1, which comes without an enclosure or display panel, consists of an indicator printed circuit board (PCB) and a driver PCB that are screwed together.

Each I/O driver has 32 outputs to drive highly programmable LEDs, and also contains 16 inputs to accommodate user-defined system commands, such as: *Acknowledge; Silence or Reset*.

NAC Expansion Module

The NAC expansion module (Model FCI2011-U1) provides either of the following additional NAC's to a Cerberus PRO 252 / 504-point FACP:

- one (1) 'Class A', or
- two (2) 'Class B' NAC's

Each NAC is rated at 3 Amps. Each NAC expansion module is monitored for open-line and short-circuit conditions.

Temperature and Humidity Range

Models FC922 and FC924 are UL 86410th Edition and ULC-S527 Listed for indoor dry locations within a temperature range of 120+/- 3°F (2°C) to 32+/- 3°F (0+/- 2°C) and a relative humidity of 93+/- 2% at a temperature of 90+/- 3°F (32+/- 2°C).

Details for Ordering

MODEL OR TYPE	PART NUMBER	PRODUCT
FCI2020-U1	S54400-A57-A1	Leased-Line / City -Tie Module
FCM2018-U3	S54400-C40-A2	Operating Interface Unit
FP2011-U1	500-450222	170-Watt Power Supply
FP2012-U1	S54400-Z60-A1	300-Watt Power Supply
FT2007-U1	S54400-A142-A1	LED Annunciator Driver
FT2008-U1	S54400-A143-A1	16-Zone Tabular Annunciator, Black
FT2008-R1	S54400-A144-A1	16-Zone Tabular Annunciator, Red
FT2009-U1	S54400-A145-A1	32-Zone Tabular Annunciator, Black
FT2009-R1	S54400-A146-A1	32-Zone Tabular Annunciator, Red
FT2014-U3	S54400-B80-A1	Remote Display Terminal, Black
FT2014-R3	S54400-B73-A1	Remote Display Terminal, Red
FT2015-U3	S54400-B88-A1	Remote Display Terminal, Black
FT2015-R3	S54400-B16-A1	Remote Display Terminal, Red
FTI2001-U1	S54400-A58-A1	Fire Terminal Board
FCA2015-U1	S54400-A63-A1	Digital Alarm Communication Transmitter
FN2001-U1	S54400-A60-A1	C-WEB Network Module
FCA2016-U1	S54400-A39-A1	RS-485 Interface
FCA2018-U1	S54400-A65-A1	Remote Peripheral Module
FCA2032-U1	S54400-B145-A1	Battery Disconnect Module
FCA2033-U1	S54400-P154-A1	License Key (S1) for remote access remote view remote operation
FCA2034-U1	S54400-P155-A1	License Key (S2) for BACnet output (monitoring only)
FCA2035-U1	S54400-P156-A1	License Key (S3) for remote access remote view remote operation BACnet output
FCI2011-U1	S54400-A54-A1	NAC Expansion Module
FCI2016-U1	S54400-A55-A1	252-Pt. Periphery Board
FCI2017-U1	S54400-A56-A1	504-Pt. Periphery Board
XCI2001-U1	S54400-A69-A1	Releasing Module
FCM2019-U3	S54400-C41-A2	Operating Interface Unit [with LED]
FCM2022-U3	S54400-C44-A2	Blank Option Module
FCM2023-U3	S54400-C45-A2	LED Option Module [Red / Yellow bi-color LED; one (1)Yellow LED]
FCM2034-U3	S54400-C138-A1	LED Option Module: [Red / Yellow bi-color LED; one (1)Yellow LED]

Details for Ordering (cont.)

MODEL OR TYPE	PART NUMBER	PRODUCT
FN2006-U1	S54400-A61-A1	Single-Mode Fiber-Optic Module
FN2007-U1	S54400-A62-A1	Multi-Mode Fiber-Optic Module
FHB2001-U1	S54400-B47-A1	One-Height-Unit Back Box, Black
FHB2001-R1	S54400-B47-A2	One-Height-Unit Back Box, Red
FHB2002-U1	S54400-B48-A1	Two-Height-Unit Back Box, Black
FHB2002-R1	S54400-B48-A2	Two-Height-Unit Back Box, Red
FHD2001-U3	S54400-B45-A1	One-Height-Unit Outer Door, Black
FHD2001-R3	S54400-B40-A1	One-Height-Unit Outer Door, Red
FHD2002-U3	S54400-B32-A1	Two-Height-Unit Outer Door [with one (1) window], Black
FHD2002-R3	S54400-C53-A1	Two-Height-Unit Outer Door [with one (1) window], Red
FHD2003-U3	S54400-C42-A1	Two-Height-Unit Outer Door [with two (2) windows], Black
FHD2003-R3	S54400-B46-A1	Two-Height-Unit Outer Door [with two (2) windows], Red
FHD2004-U1	S54400-B52-A1	Inner door, Black
FHD2005-U1	S54400-B53-A1	Inner door, Solid Black
FHD2006-U1	S54400-C46-A1	Clear-lens window
FHD2012-U1	S54400-C135-A1	Optional inner door [for housing a Model FT201-series display terminal], Black
FHA2056-U1	S54400-B18-A1	Cerberus PRO Hardware Migration Kit, Black
FHA2056-R1	S54400-B19-A1	Cerberus PRO Hardware Migration Kit, Red
FHAMIQKIT-04	S54400-C24-A1	MXL-IQ Mechanical Migration Kit, Black
FHAMIQKIT-05	S54400-C25-A1	MXL-IQ Mechanical Migration Kit, Red
FHAMIQKIT-03	S54400-K1-A1	One (1) PMI cable & One (1) Expansion Cable
FHAMIQKIT-01	S54400-A66-A1	One (1) FCL2004 Module with PMI Cable
FHAMIQKIT-02	S54400-A67-A1	One (1) FCL2004 Module with Expansion Cable
FCL-MXLPLATE	S54400-B153-A1	Mounting Bracket for FCL2004 (2HU/USCG)
FH2072-UA	S54433-A5- A1	Universal Battery Cabinet
FTH2073-UA	S54433-A6- A1	Universal Annunciator Cabinet
FH2072-UA	S54433-A5- A1	Universal Battery Cabinet
FTH2073-UA	S54433-A6- A1	Universal Annunciator Cabinet

Electronics Package		
MODEL OR TYPE	PART NUMBER	PRODUCT
FC922-US	S54400-C14-A1	252-Point Fire System with 170 Watt Power Supply and standard operator interfaces.
		Includes: <ul style="list-style-type: none"> ▪ FP2011-U1 (1 Qty.) ▪ FCI2016-U1 (1 Qty.) ▪ FCM2018-U3 (1 Qty.)
FC924-US	S54400-C15-A1	504-Point Fire System with 170 Watt Power Supply and standard operator interfaces.
		Includes: <ul style="list-style-type: none"> ▪ FP2011-U1 (1 Qty.) ▪ FCI2017-U1 (1 Qty.) ▪ FCM2018-U3 (1 Qty.)
FC922-UE	S54400-C16-A1	252-Point Fire System with 170 Watt Power Supply and standard operator interfaces. (with 24-zone LEDs)
		Includes: <ul style="list-style-type: none"> ▪ FP2011-U1 (1 Qty.) ▪ FCI2016-U1 (1 Qty.) ▪ FCM2019-U3 (1 Qty.)
FC924-UE	S54400-C17-A1	504-Point Fire System with 170 Watt Power Supply and standard operator interfaces. (with 24-zone LEDs)
		Includes: <ul style="list-style-type: none"> ▪ FP2011-U1 (1 Qty.) ▪ FCI2017-U1 (1 Qty.) ▪ FCM2019-U3 (1 Qty.)
FT924-US	S54400-C18-A1	Network Terminal w/ standard operator interface
		Includes: <ul style="list-style-type: none"> ▪ FTI2001-U1 (1 Qty.) ▪ FCM2018-U3 (1 Qty.)
FT924-UE	S54400-C19-A1	Network Terminal w/ standard operator interface (with 24-zone LEDs)
		Includes: <ul style="list-style-type: none"> ▪ FTI2001-U1 (1 Qty.) ▪ FCM2019-U3 (1 Qty.)
FC922-UT	S54400-C20-A1	252-Point Fire System with 300 Watt Power Supply and standard operator interfaces
		Includes: <ul style="list-style-type: none"> ▪ FP2012-U1 (1 Qty.) ▪ FCI2016-U1 (1 Qty.) ▪ FCM2018-U3 (1 Qty.)
FC924-UT	S54400-C21-A1	504-Point Fire System with 300 Watt Power Supply and standard operator interfaces
		Includes: <ul style="list-style-type: none"> ▪ FP2012-U1 (1 Qty.) ▪ FCI2017-U1 (1 Qty.) ▪ FCM2018-U3 (1 Qty.)

Electronics Package (Cont.)		
MODEL OR TYPE	PART NUMBER	PRODUCT
FC922-UF	S54400-C22-A1	252-Point Fire System with 300 Watt Power Supply and standard operator interfaces(with 24-zone LEDs)
		Includes: <ul style="list-style-type: none"> ▪ FP2012-U1 (1 Qty.) ▪ FCI2016-U1 (1 Qty.) ▪ FCM2019-U3 (1 Qty.)
FC924-UF	S54400-C23-A1	504-Point Fire System with 300 Watt Power Supply and standard operator interfaces(with 24-zone LEDs)
		Includes: <ul style="list-style-type: none"> ▪ FP2012-U1 (1 Qty.) ▪ FCI2017-U1 (1 Qty.) ▪ FCM2019-U3 (1 Qty.)
Canadian-Specific Applications:		
FCM2035-U3	S54400-C140-A1	Enhanced Operating Unit (with LEDs)

Note: Refer to Data Sheet# 9800 for **Canadian-Specific** Electronics Package.

Related Documentation	
Product	Datasheet Number
Cerberus PRO Operating Interface Units	9801
Cerberus PRO System Periphery Boards	9802
Cerberus PRO Fire Terminal and Equipment	9803
Cerberus PRO Digital Alarm Communicator Transmitter (DACT)	9804
C-WEB Network Module	9805
170-Watt and 300-Watt Power Supplies	9806
Cerberus PRO Fire-Alarm Enclosures and Equipment	9807
NAC Expansion Module	9808
Releasing Module	9809
Leased-Line / City-Tie Module	9810
Cerberus PRO Remote Peripheral Module	9811
Cerberus PRO Remote Display Terminals	9812
Single / Multi-Mode Fiber-Optic Modules	9814
LED / Blank Option Modules	9816
Battery Disconnect Module	9819
S-series license keys	9820
Cerberus PRO Marine Fire and Detection Equipment	9822
Cerberus PRO LED Annunciator Driver	9824
Cerberus PRO 16 & 32 -Zone Tabular Annunciators	9825
Cerberus PRO Migration Hardware Kit	9826

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NOTICE – The information contained in this data-sheet document is intended only as a summary, and is subject to change without notice. The product(s) described here has/have a specific instruction sheet(s) that cover various technical, limitation and liability information.

Copies of install-type, instruction sheets – as well as the *General Product Warning and Limitations* document, which also contains important data, are provided with the product, and are available from the Manufacturer.

Data contained in the aforesaid type of documentation should be consulted with a fire-safety professional before specifying or using the product.

Any further questions or assistance concerning particular problems that might arise, relative to the proper functioning of the equipment, please contact the Manufacturer.

SIEMENS

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